JOURNAL OF OPTIMIZATION
THEORY AND APPLICATIONS

Vol. 25, No. 1 May 1978

CONTENTS

CONTRIBUTED PAPERS

A Characterization of the Minimizer of a Function, *D. G. McDowell* 1

Accelerated Conjugate Direction Methods for Unconstrained Optimization, *M. L. Lenard* 11

Multimodality Analysis of a Class of Multistage Allocation Problems, *K. Oi, H. Sayama, and T. Takamatsu* 33

Direct Transformation of Variational Problems into Cauchy Systems. I. Scalar-Quadratic Case, *J. Hess and R. Kalaba* . 49

Optimal Control of Systems Governed by a Class of Nonlinear Evolution Equations in a Reflexive Banach Space, *N. U. Ahmed and K. L. Teo* 57

An Existence Theorem for Lagrange Problems in Banach Spaces, *O. Caligaris and P. Oliva* 83

A Short Proof of a General Multiplier Rule, *A. Feinstein* . . 93

Subspace Exit Properties of Extremal Controls, *R. J. Stern* . 105

Control with Conic Control Constraint Set, *M. Pachter and D. H. Jacobson* 117

Discounted Markov Games: Generalized Policy Iteration Method, *J. Van der Wal* 125

Designing Information Structures for Quadratic Decision Problems, *K. C. Chu* 139

TECHNICAL NOTE

A Simplified Test for Optimality, *R. Abrams and L. Kerzner* . 161

GENERAL INFORMATION

Editorial Policy 171

Preparation of Papers 173

Editorial Addresses 177

JOURNAL OF OPTIMIZATION THEORY AND APPLICATIONS

Vol. 25, No. 2 June 1978

CONTENTS

CONTRIBUTED PAPERS

Decomposition in Large System Optimization Using the Method of Multipliers, *N. Watanabe, Y. Nishimura, and M. Matsubara* 181

A Converse for Disjunctive Constraints, *C. E. Blair and R. G. Jeroslow* . 195

Simultaneous and Sequential Solution of a Stiff Differential Equation System, *S. M. Roberts* 207

On the Numerical Determination of Optimal Inputs, *R. E. Kalaba and K. Spingarn* 219

An Interaction-Coordination Algorithm with Modified Performance Index for Nonlinear Optimal Control Problems, *Y. Nishikawa, T. Ojika, H. Shimazutsu, and M. Okudaira* 229

A New Approach to Filtering and Adaptive Control, *L. Tesfatsion* . . 247

A Gradient Projection Method for Solving Continuous Games, *R. G. Underwood* 263

A Finite-State, Finite-Memory Minimum Principle, *N. R. Sandell, Jr. and M. Athans* 289

TECHNICAL NOTES

Helical Torsion Springs for Minimum Weight by Geometric Programming, *G. K. Agrawal* 307

The Forsythe–Motzkin Method for Singular Linear Operator Equations, *C. W. Groetsch* 311

TECHNICAL COMMENTS

Pontryagin's Principle for Problems with Isoperimetric Constraints and Problems with Inequality Terminal Constraints: Comment, *B. A. Forster and N. V. Long* 317

Pontryagin's Principle for Problems with Isoperimetric Constraints and Problems with Inequality Terminal Constraints: Reply, *W. Schmitendorf* 323

GENERAL INFORMATION

Editorial Policy 325

Preparation of Papers 327

Editorial Addresses 331

JOURNAL OF OPTIMIZATION
THEORY AND APPLICATIONS

Vol. 25, No. 3 July 1978

CONTENTS

CONTRIBUTED PAPERS

A Computational Method for Minimization with Nonlinear Constraints, *R. P. Mikkilineni and T. Feagin* 335

A Duality Theorem for a Homogeneous Fractional Programming Problem, *B. Mond and M. Schechter* 349

Mathematical Programming Techniques in Majorization, *J. P. Dauer and R. J. Krueger* 361

A Remark on a Regularity Assumption for the Mathematical Programming Problem in Banach Spaces, *J. Zowe* 375

Feasible Directions in Economic Policy, *D. A. Livesey* . . . 383

Calculation of Optimal Controls of Specified Accuracy, *D. J. Mellefont and R. W. H. Sargent* 407

Active Control of Flexible Systems, *M. J. Balas* 415

TECHNICAL NOTES

A Finite Steepest-Ascent Algorithm for Maximizing Piecewise-Linear Concave Functions, *M. S. Bazaraa, J. J. Goode, and R. L. Rardin* 437

On the Convergence Properties of Second-Order Multiplier Methods, *D. P. Bertsekas* 443

Calculating the Cone of Directions of Constancy, *H. Wolkowicz* 451

Connectedness of the Set of Nondominated Outcomes in Multicriteria Optimization, *P. H. Naccache* 459

On a Class of Three-Player Differential Games, *S. Tanimoto* . 469

GENERAL INFORMATION

Editorial Policy 475

Preparation of Papers 477

Editorial Addresses 481

JOURNAL OF OPTIMIZATION
THEORY AND APPLICATIONS

Vol. 25, No. 4 August 1978

CONTENTS

CONTRIBUTED PAPERS

Complete Stability of Noncooperative Games, *D. G. Luenberger* 485

Numerical Comparison of Several Variable-Metric Algorithms, *D. F. Shanno and K. H. Phua* 507

Geometric Methods for Nonlinear Optimal Control Problems, *J. Baillieul* 519

Necessary and Sufficient Conditions for Bang–Bang Control, *H. Fujihira* 549

On the Uniform Boundedness of Solutions of Contingent Equations, *M. L. J. Hautus* 555

Time-Optimal Control of Parabolic Systems with Boundary Conditions Involving Time Delays, *G. Knowles* 563

TECHNICAL NOTES

An Implicit Function Theorem, *K. Jittorntrum* 575

Some Function Classes Closed Under Infimal Convolution, *D. H. Martin* 579

An Application of Guignard's Generalized Kuhn–Tucker Conditions, *P. J. Bender* 585

A New Conservation Law for Linear Filtering Processes, *J. Casti* 591

GENERAL INFORMATION

Editorial Policy 597

Preparation of Papers 599

Editorial Addresses 603

SUBJECT INDEX TO VOLUME 25 607

AUTHOR INDEX TO VOLUME 25 611